

REMARKS

Claims 39-61 are pending, with claims 39, 43, 50 and 54 being independent. Claims 62-65 have been cancelled and claims 39-54 and 56-61 have been amended to recite "impurity regions" instead of "pinning regions," that the impurity regions are doped with a conductivity type opposite to the source and drain regions, and that the impurity regions are separated from each other. No new matter has been introduced.

Claims 39-42, 50-58, 62, 64 and 65 have been rejected as being anticipated by Sanchez (U.S. Patent No. 5,583,067). Applicant requests reconsideration and withdrawal of this rejection because Sanchez does not describe or suggest first and second impurity regions formed in the semiconductor substrate in a vicinity of a boundary between the channel region and one of the source and drain regions, wherein the first and second impurity regions are separated from one another and are doped with an impurity of a conductivity type opposite to the source and drain regions, as recited in each of independent claims 39, 50 and 54.

The P-doped regions 42a and 42b of Sanchez cannot correspond to the recited first and second impurity regions since, as shown in Figs. 4f and 4g of Sanchez, the P-doped regions 42a and 42b are located on opposite sides of the channel region. As such, they cannot be said to be located "in a vicinity of a boundary between said channel region and one of the source and drain regions," as recited in each of amended claims 39, 50 and 54. In particular, while one of the P-doped regions is located in the vicinity of a first boundary between the channel region and the source region, the other of the P-doped regions is located in the vicinity of a second boundary between the channel region and the drain region.

Nor could different portions of the P-doped region 42a or the P-doped region 42b correspond to the recited first and second pinning regions, since those portions would not be separated from one another as also recited in each of independent claims 39, 50 and 54.

Accordingly, for at least these reasons, the rejection should be withdrawn.

Claims 39, 43, 50, 54 and 59-65 have been rejected as being anticipated by Shimizu (U.S. Patent No. 5,217,910). Applicant requests reconsideration and withdrawal of this rejection because Shimizu does not describe or suggest first and second impurity regions formed in the semiconductor substrate in a vicinity of a boundary between the channel region and one of the

source and drain regions, wherein the first and second impurity regions are separated from one another and are doped with an impurity of a conductivity type opposite to the source and drain regions, as recited in each of independent claims 39, 43, 50 and 54.

While the previous rejection asserts that the device of Fig. 9F includes p-doped source and drain regions, that the n-doped regions 31 and 38 of Fig. 9F correspond to the recited pinning regions, and that they have opposite polarities to the source and drain regions, this is not the case. Rather, as shown in Fig. 9I and discussed at col. 10, lines 48-55, the regions 31 and 38 are part of the source and drain regions 42 and 44, and do not have opposite polarities to those regions (i.e., the regions 31, 38, 42 and 44 are all n-type regions).

Accordingly, for at least these reasons, the rejection should be withdrawn.

Claims 44-49 have been rejected as being unpatentable over Shimizu in view of Sanchez. Applicant requests reconsideration and withdrawal of this rejection because, for the reasons discussed above, Sanchez does not remedy the failure of Shimizu to describe or suggest the subject matter of the independent claims.

Applicant submits that all claims are in condition for allowance.

The fee in the amount of \$1,690 in payment of the request for continued examination fee (\$790) and the second and third month extension fee (\$900, the first month fee was previously paid) is being paid concurrently herewith on the Electronic Filing System (EFS) by way of Deposit Account authorization. Please apply any other charges or credits to Deposit Account No. 06-1050.

Respectfully submitted,

Date:

2/23/07


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